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THE EMPLOYED STUDENT AND HIS ACHIEVEMENT LEVEL AT SAN JOAQUIN DELTA JUNIOR COLLEGE.

BY- FITCH, NAOMI

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IN ORDER TO DETERMINE THE EFFECT OF STUDENT EMPLOYMENT ON ACADEMIC PERFORMANCE, A SURVEY WAS ADMINISTERED TO 1,429 NEW FRESHMEN DURING THE FALL SEMESTER, 1965. APTITUDE TEST SCORES AND GRADE POINT AVERAGES WERE COMPARED FOR NONWORKING STUDENTS AND FOR STUDENTS GROUPED INTO FIVE CLASSIFICATIONS ACCORDING TO THE NUMBER OF HOURS WORKED PER WEEK. ANALYSIS BY SEX AND BY ACADEMIC LOAD WERE TABULATED. AS THE WEEKLY NUMBER OF HOURS OF EMPLOYMENT INCREASED, THE PERCENTAGE OF STUDENTS EARNING LESS THAN A "C" AVERAGE ALSO INCREASED. WOMEN STUDENTS GENERALLY EARNED HIGHER GRADE POINT AVERAGES THAN MEN. ALTHOUGH MEN STUDENTS WHO WORKED TENDED TO WORK MORE HOURS THAN THE WOMEN STUDENTS. FINDINGS SUGGEST THAT EMPLOYMENT MAY BE CONSIDERED AS A PRIMARY CAUSE FOR LOW GRADES FOR STUDENTS AT ALL LEVELS OF VERBAL ABILITY, BUT ESPECIALLY FOR STUDENTS WORKING OVER 10 HOURS A WEEK. CONDITIONS OF EMPLOYMENT MAY BE MORE IMPORTANT THAN THE FACT OF EMPLOYMENT IN CONSIDERATION OF THE EFFECT THAT PART-TIME WORK MAY HAVE UPON GRADES. COUNSELORS AND ADVISERS SHOULD GIVE CAREFUL ATTENTION TO THE SCHOLASTIC LOAD OF EMPLOYED STUDENTS. (AL)

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THE EMPLOYED STUDENT AND HIS ACHIEVEMENT LEVEL AT SAN JOAQUIN DELTA JUNIOR COLLEGE

by

Mrs. Naomi Fitch

Director of Occupational Services
San Joaquin Delta College
Stockton, California

UNIVERSITY OF CALIF.
LOS ANGELES

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CLEARINGHOUSE FOR
JUNIOR COLLEGE
INFORMATION

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STATEMENT OF THE PROBLEM

Fifty-five per cent of the students at San Joaquin Delta College work to help earn money for college expenses. Clearly, many students find it necessary or desirable to combine part-time work with college attendance. It is frequently assumed that this combination has adverse effects upon the student. In particular, it is assumed that, since the hours devoted to working could have been devoted to studying, the working student's grades will suffer in comparison to the grades of an equally able but non-working peer. This study will examine this assumption.

Hypothesis: From informal observations made over the past ten years, while serving as Director of Occupational Services, the writer has tested the following null hypothesis ---

> that there is no significant difference in the academic achievement of working and non-working students.

To ensure a fair test of the hypothesis, an effort was made to control certain factors which presumably influence academic achievement. These include academic aptitude and number of credits carried.

DESIGN AND STATISTICAL ANALYSIS

A STUDENT SURVEY (see Appendix) was administered to 1,429 new freshmen during the eighth week of the fall semester, 1965. One question in this survey asked: "On the average, how many hours are you spending in part-time work this year in college, excluding vacations?" The student checked one of six alternatives, ranging from "none" to "more than thirty." His response to that question will be used to place him in one of the following five groups:

(a) none; (b) 1-10 hr.; (c) 11-20 hr.; (d) 21-30 hr.; (e) more than 30 hr.

Mean first semester grade-point averages for these five groups have been compared to determine if any significant differences exist. By limiting the analysis to first semester performance, the study controls for differences which may be due to the particular semester for which a student was enrolled.

Because different results may be obtained for men than for women, the data was run through the computer twice, once for each sex. This procedure helped to define sex differences as a possible explanation for the results.

Naturally, academic performance is a function of academic potential. To the degree that students who follow different part-time work patterns are different in their academic potentials, any differences in academic achievement among these students may be due to either work pattern or ability (i.e., the two

factors would be confounded). Therefore, academic potential has been controlled by partialling out the effects of SCAT-TOTAL scores. In essence, the statistical technique equates the five groups of each sex in terms of scholastic aptitude scores.

Finally, it has been suggested that grade-point average is a function of the number of credits attempted. (In fact, it is common for junior colleges to limit the credit load in accordance with part-time work commitments; San Joaquin Delta College has not followed this practice.) On the chance that this hypothesis is true, it was decided to control the effects of number of credits attempted in the same way that SCAT-TOTAL scores were controlled.

The resulting design for the study consists of five groups. The first group did not work part-time; the fifth group worked more than 30 hours per week; the other three groups claimed intermediate part-time work commitments. First semester grade-point averages were recorded for each student in each group. At the same time SCAT-TOTAL score (stanine) and number of credits attempted were recorded.

FUTURE RESEARCH

The study will be replicated in the fall semester, 1966, to check the reliability of the findings.

Other related research needed:

The College-Work Study Program at Delta College
Part-time work and Attrition
Part-time work for High and Low Ability Students

LIMITATIONS OF THE STUDY

The following independent variables although recognized have not been controlled in this study:

1. Motivation of student
2. Time spent in commuting
3. The nature of the employment
4. Personality of the student

PROCEDURE FOR ACTION

The results will be reported to counselors, administrators, and instructors for observation of possible implications and a plan of action, if needed.

FINDINGS

1. Fifty-five per cent of the Delta College students in the entering class of the fall semester, 1965, indicated on the freshman profile questionnaire that they were employed part-time while attending school. This represented a sample of 1,429 freshmen drawn at random from a total of 2,050.

2. The comparative relationship between grade-point average and the verbal stanines on the SCAT entrance examination appear to follow the same profile as the total school population, see table XI.

3. As the number of hours employed per week increases the percentage of students earning less than a "C" average increases in all stanine categories.

4. The units attempted retained the same or very similar ratio in all of the following categories: Hours Worked --- none; 1-10; 11-20; 21-30; over 30.

5. The ratio between male and female changed greatly as the number of hours worked increased. The men students who worked tended to work more hours than the women students.

6. Women students generally earn higher grade-point averages than men (see table XII.). This may partially explain the lower grade-point averages of students employed over ten hours since more men students were in these categories.

SUMMARY

1. The research conducted at San Joaquin Delta College on the effect of employment on scholastic success leads one to suggest that poor scholarship is a result of many factors; however, employment may be considered as a primary cause for low grades for students in all verbal stanines, especially students working over ten hours a week.

2. The conditions of employment may be much more important than the fact of employment when considering the effect that part-time work may have upon grades.

3. Counselors and advisers should give careful attention to the scholastic load of the students employed over ten hours a week.

4. Low grades and withdrawals may be avoided by careful attention to academic load.

5. Attention of counselors should be directed especially to the men students who find it essential to work over ten hours a week.

6. Summer sessions may be suggested as an alternative to an unrealistic scholastic load for students who work over ten hours a week.

7. A large percentage of students in all the verbal stanine categories tend to "go under" when they must work over twenty hours a week.

COUNSELING THE EMPLOYED STUDENTS

Common sense tells us that we must give careful consideration to factors of employment and scholastic load, but an adviser is not justified in automatically assuming that part-time employment leads to poor scholarship. There is a need to consider all factors that might contribute to poor scholarship.

The kind of job a student takes, and the circumstances under which he must work, should be carefully noted. Some part-time jobs are such that a student can spend a portion of the time on the job doing his school work. Others may involve a lot of transit time in getting to and from work and in addition demand the full attention of the student while he is on the job. *

* Anderson, Bert "The Academic Load of the Employed Student," College Student Personnel, January, 1966

REVIEW OF PREVIOUS STUDIES

A study (Bryant, 1961) of 76 students who were employed from 20 to 48 hours per week and who were carrying class loads in excess of 10 hours per week revealed that six and one-half per cent of the group received failing grades, and eleven per cent withdrew before the end of the semester. The remaining 82.5 per cent earned grades of "D" or higher. It should be noted that only 1.39 per cent earned an "A" average.

The effect of employment upon academic achievement was examined (Trueblood, 1956) and the results indicated that employment seemed to have little effect upon college grades. Furthermore, employed students participated in extra-curricular activities with greater frequency than did non-employed students. The findings also suggested that students employed in jobs related to their academic objectives tended to earn slightly better grades than those employed in situations having no relationship to their major field of study.

An investigation (Dickinson and Newbegin, 1959) of students who had pursued their college work on a continuous basis for at least eight or more quarters led to the conclusion that motivation seemed to be the key factor, and that students who carried both a near-normal credit load and an outside job did better than predicted, indicating that such a program is feasible for many students.

A study (Trueblood, 1957) of 1,711 employed students at Indiana University resulted in the conclusion that part-time employment did not seem to have a significant adverse or favorable effect upon academic performance. Furthermore, the number of hours students were employed each week had no appreciable relationship to their grade-point averages.

It is not unusual for faculty advisers to recommend a reduced load of college studies when students are employed. A recent report (Dermengian, 1964) reveals that a number of California junior colleges have a definite policy of restricting the course loads of those students on academic probation who are employed or who participate in student activities. The validity of these recommendations and requirements should be reviewed carefully, since the cost of college attendance makes it necessary for many students to earn at least a part of their expenses while they work toward their academic degrees. It is also unfortunate if we unnecessarily prevent students from participating in student activities that may contribute to their development. Common experience tells us that many students successfully complete college while they are employed or while they engage in student activity programs.

Table I

HOURS WORKED BY EMPLOYED STUDENTS SAN JOAQUIN DELTA COLLEGE

During the eighth week of the fall semester, 1965, the entering students at Delta College were asked to respond to the following question:

> on the average, how many hours per week are you spending in part-time work this year in college?

RESPONSES TO ABOVE QUESTION

Hours worked	Number of students	Per cent
none	640	44.7
less than six	117	8.1
six to ten	179	12.5
eleven to twenty	296	20.7
twenty-one to thirty	126	8.8
more than thirty	71	5.0
total	1,429	99.0

SUMMARY

non-employed students	640	44.0
employed students	789	55.0

Table II

PROFILE OF THE STUDENTS WHO ANSWERED "NONE"
TO THE QUESTION:
On the average, how many hours per week
are you spending in part-time work this year in college?

COMPARISON
Grade-Point Average to Verbal Stanines
Fall Semester, 1965
San Joaquin Delta College

NON-WORKING STUDENTS

Verbal Stanines*	Number	% Below "C" Average	Number	% Above "C" Average
00	4	19.04	17	80.95
01	8	50.00	8	50.00
02	19	55.88	15	44.11
03	31	65.95	16	34.04
04	20	33.89	39	66.10
05	46	35.11	85	64.88
06	43	31.38	94	68.61
07	22	23.15	73	76.84
08	12	20.33	47	79.66
09	7	17.07	34	82.93
Total	212	33.00	428	66.00

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

The table above shows the relationship of grade-point averages and stanine scores for the entering freshmen, fall 1965, who indicated that they were NOT working while attending Delta. This table corresponds to similar data for the entire population at Delta College (see Table XI .).

Table III

COMPARISON
Grade-Point Average to Verbal Stanines
Fall Semester, 1965
San Joaquin Delta College

STUDENTS WHO WORKED LESS THAN SIX HOURS A WEEK

Verbal Stanines*	Number	% Below "C" Average	Number	% Above "C" Average
00	1	50.00	1	50.00
01	1	100.00	0	0.00
02	3	75.00	1	25.00
03	6	50.00	6	50.00
04	7	46.66	8	53.33
05	10	33.33	20	66.66
06	6	28.51	15	71.42
07	3	21.42	11	78.57
08	2	16.66	10	83.33
09	2	33.33	4	66.66
Total	41	35.00	76	64.00

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

The entering freshmen at Delta College who work less than six hours a week show grades which relate to their verbal scores on the SCAT. The grades tend to be slightly lower than those of the non-employed peers.

Table IV

COMPARISON
Grade-Point Average to Verbal Stanines
Fall Semester, 1965
San Joaquin Delta College

STUDENTS WHO WORKED SIX TO TEN HOURS A WEEK

Verbal Stanines*	Number	% Below "C" Average	Number	% Above "C" Average
00	4	80.00	1	20.00
01	2	40.00	3	60.00
02	3	50.00	3	50.00
03	6	60.00	4	40.00
04	12	41.37	17	58.62
05	14	42.42	19	57.57
06	17	39.53	26	60.46
07	8	29.62	19	70.37
08	5	31.25	11	68.75
09	0	0.00	5	100.00
Total	71	39.00	108	60.30

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

Freshmen employed six to ten hours a week generally earn lower grades than the non-employed freshmen do.

Table V

COMPARISON
Grade-Point Average to Verbal Stanines
Fall Semester, 1965
San Joaquin Delta College

STUDENTS WHO WORKED ELEVEN TO TWENTY HOURS A WEEK

Verbal Stanines*	Number	% Below "C" Average	Number	% Above "C" Average
00	3	27.27	8	72.72
01	12	75.00	4	25.00
02	11	64.70	6	35.29
03	16	51.62	15	48.38
04	17	47.22	19	52.77
05	28	45.16	34	54.83
06	20	40.81	29	59.18
07	13	27.65	34	72.34
08	5	22.72	17	77.27
09	1	20.00	4	80.00
Total	126	42.00	170	57.00

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

Almost all categories above show that the working students employed eleven to twenty hours a week generally earn lower grades than do the freshmen students not employed.

Table VI

COMPARISON
Grade-Point Average to Verbal Stanines
Fall Semester, 1965
San Joaquin Delta College

STUDENTS WHO WORKED TWENTY-ONE TO THIRTY HOURS A WEEK

Verbal Stanines*	Number	% Below "C" Average	Number	% Above "C" Average
00	00	0.00	4	100.00
01	2	100.00	0	0.00
02	2	50.00	2	50.00
03	5	41.66	7	58.33
04	8	47.05	9	52.94
05	12	63.15	7	36.84
06	19	47.50	21	52.50
07	7	35.00	13	65.00
08	1	16.66	5	83.33
09	0	0.00	2	100.00
Total	56	44.00	70	55.00

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

There is a very perceptible difference between the grades earned by the employed students working twenty-one to thirty hours a week and the non-employed freshmen.

Table VII

COMPARISON
Grade-Point Average to Verbal Stanines
Fall Semester, 1965
San Joaquin Delta College

STUDENTS WHO WORKED MORE THAN THIRTY HOURS A WEEK

Verbal Stanines*	Number	% Below "C" Average	Number	% Above "C" Average
00	3	60.00	2	40.00
01	3	50.00	3	50.00
02	6	100.00	0	0.00
03	4	100.00	0	0.00
04	6	60.00	4	40.00
05	6	46.15	7	53.84
06	10	71.42	4	28.57
07	4	66.66	2	33.33
08	5	83.33	1	16.66
09	1	100.00	0	0.00
Total	48	67.00	23	32.00

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

The table above shows that students who work over thirty hours a week earn much lower grades (in all stanine categories) compared to their non-employed peers.

Table VII

COMPARISON
Hours of Work and Per Cent of Students with Grades Below "C"
Fall Semester, 1965
San Joaquin Delta College

PER CENT BELOW "C" GRADE

Stanines*	Hours Worked Per Week					
	none	less than six	six to ten	11 to 20	21 to 30	more than 30
00	19.04	50.00	80.00	27.27	0.00	60.00
01	50.00	100.00	40.00	75.00	100.00	50.00
02	55.88	75.00	50.00	64.70	50.00	100.00
03	65.95	50.00	60.00	51.62	41.66	100.00
04	33.89	46.66	41.37	47.22	47.05	60.00
05	35.11	33.33	42.42	45.16	63.15	46.15
06	31.38	28.51	39.53	40.81	47.50	71.42
07	23.15	21.42	29.62	27.65	35.00	66.66
08	20.33	16.66	31.25	22.72	16.66	83.33
09	17.07	33.33	0.00	20.00	0.00	100.00

*Stanines --- each unit represents one-half standard deviation; mean score is represented by five.

In every stanine category above the third stanine there is an observed positive relationship between the number of hours worked by the student and the percentage of grades assigned below "C."

Table IX

COMPARISON
Hours Worked and Units Attempted
Entering Class, Fall Semester, 1965
San Joaquin Delta College

Hours worked	No. of students	% below 12 units	No. of students	% 12 units and above
none	100	15.00	540	84.00
less than six	17	14.00	100	85.00
six to ten	30	16.00	149	83.00
11 to 20	60	20.00	236	79.00
21 to 30	36	28.00	90	71.00
more than 30	28	39.00	43	60.00

The table above shows that usually the more hours a student works the fewer units he attempts.

This indicates that the relationships shown on the previous tables between grade-point average and hours worked may exist notwithstanding the number of units the student attempts.

Table X

COMPARISON
Hours Worked --- Male and Female
Entering Freshmen, Fall Semester, 1965
San Joaquin Delta College

Hours worked	Male		Female	
	no.	%	no.	%
none	299	48.00	323	51.00
less than six	66	58.00	47	41.00
six to ten	102	58.00	73	41.00
11 to 20	205	70.00	84	29.00
21 to 30	91	75.00	30	24.00
more than 30	58	86.00	9	13.00

The employed male students as shown above tend to work more hours than the employed female students. At Delta College the women students generally earn better grades than the men students (see Table XII of this report.).

The apparent relationship between low grades and hours worked may be effected by the male-female ratio. In fact the better showing usually made by women students when comparing grades with male students may be explained in part by the fact that men students often work more hours than the women students.

ACKNOWLEDGMENTS

The questionnaires used as a basis of this report were distributed and collected by the counselors at Delta College.

The computer programming was designed by Mr. David Shapiro and Mr. Richard Dangarin.

Dr. T. R. Mc Connell, Professor in Higher Education, University of California, Berkeley, suggested the basic pattern for the study.

The report has been typed by my cousin, Mr. Glenn Rice, and the cover was designed and printed by my husband, William Fitch.

I deeply appreciate the work of all those mentioned above. Without their help this report could not have been completed.

SAN JOAQUIN DELTA COLLEGE

GRADE POINT AVERAGE -STANINE STUDY

Table XI

Each unit represents one-half a standard deviation; mean score is represented by 5.

***0-No Stanine Recorded

FALL - 1965

STANINE "A"

(Verbal)

*N-Number

**P-Percentage

STANINES		Cumulative GPA										
		.0-.49	.50-.99	1.00-1.49	1.50-1.99	Percent Below "C"	2.00-2.49	2.50-2.99	3.00-3.49	3.50-4.00	Percent Above "C"	TOTAL
0***	N*	39	11	36	145	231	177	127	85	38	427	658
	P**	6	2	5	22	35%	27	19	13	6	65%	
1	N	19	6	24	25	74	31	13	6	2	52	126
	P	14	5	19	20	59%	25	10	5	2	42%	
2	N	16	10	16	41	83	49	21	5	0	75	158
	P	10	6	10	26	52%	32	13	3	0	47%	
3	N	24	13	29	70	136	71	31	19	1	122	258
	P	9	5	11	27	52%	27	11	7	3	48%	
4	N	27	12	36	99	174	123	69	24	3	219	393
	P	7	3	9	25	44%	31	18	6	1	56%	
5	N	71	21	46	160	298	222	120	45	7	394	692
	P	10	3	7	23	43%	32	17	7	1	57%	
6	N	68	17	45	133	263	201	151	68	14	434	697
	P	10	2	6	19	37%	29	22	10	2	63%	
7	N	28	6	26	86	146	145	110	67	20	342	488
	P	6	1	5	18	30%	30	22	14	4	71%	
8	N	21	2	14	39	76	63	67	49	15	194	270
	P	8	1	5	14	28%	23	25	18	6	72%	
9	N	8	2	6	25	41	30	30	23	18	101	142
	P	6	1	4	18	29%	21	21	16	13	71%	
TOTAL		321	100	278	823	1522	1112	739	391	118	2360	3882
PERCENTAGE		8.26	2.57	7.16	21.20	39.19	28.64	19.03	10.07	3.03	60.77	100%

SAN JOAQUIN DELTA COLLEGE

Table XII

GRADE POINT AVERAGE STUDY
By
SEX
Fall - 1965

	.0 -.45	.50-.99	1.00-1.45	1.50-1.99	Percent Below "C"	2.00-2.45	2.50-2.99	3.00-3.49	3.50-4.00	Percent Above "C"	TOTAL
MALE	187	75	191	538	991 44%	684	386	168	40	1278 56%	2269
FEMALE	131	25	85	281	522 33%	425	348	223	78	1074 67%	1596
TOTAL - Number					1513					2352	3865
Percent					39%					61%	100%

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